MassGIS Shapefile DataViewer 9.x Instructions

Instructions Include:

The DataViewer will NOT work with any earlier version of ArcGIS (8.0 – 8.3). It will only work with ArcGIS 9.0 or higher.

For instructions on how to install the MassGIS PGDB Data Viewer 9.x please refer to the document Installing_ArcGIS9_Shapefile_DataViewer.pdf.

After you have loaded the MassGIS_DataViewer.dll file into an ArcMap document and the new toolbar, MassGIS Shapefile Data Viewer 9.x (v.2.1) is added and activated, three buttons are displayed on the toolbar:

The three buttons are:

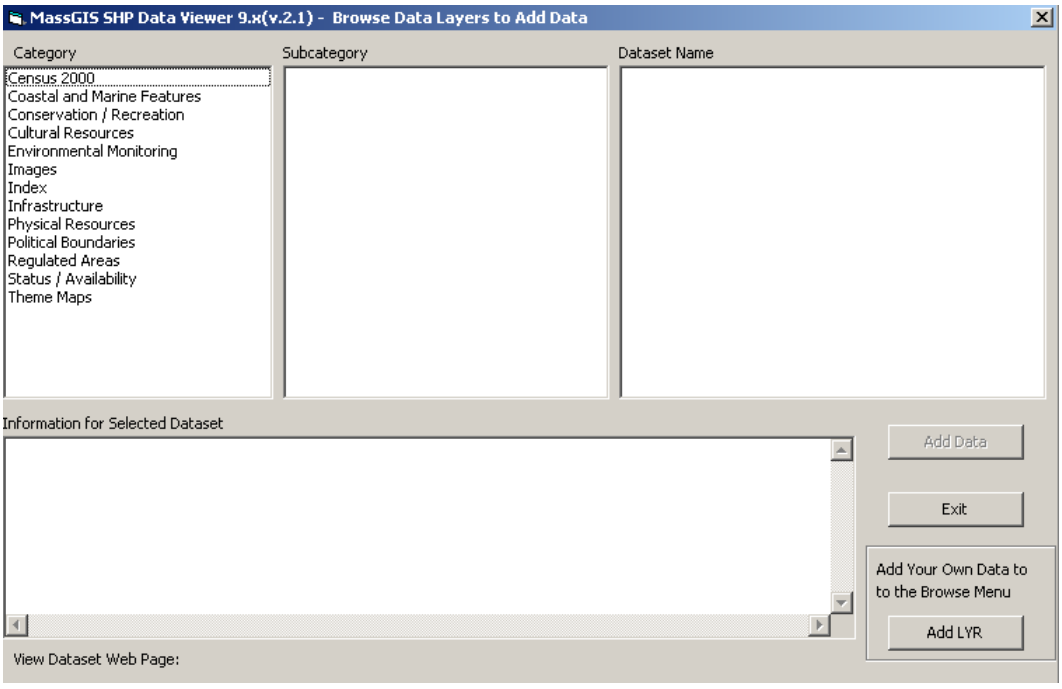
A - Add/Browse Data – displays the Browse window which allows you to view the data in a menu system, using categories and subcategories of data.

Search - Search by keywords –displays the Search window allowing you to enter keywords to locate and add data.

Z - Zoom to Extent – allows you to zoom to standard areas, based on selecting the extent from a menu system, with categories and subcategories.

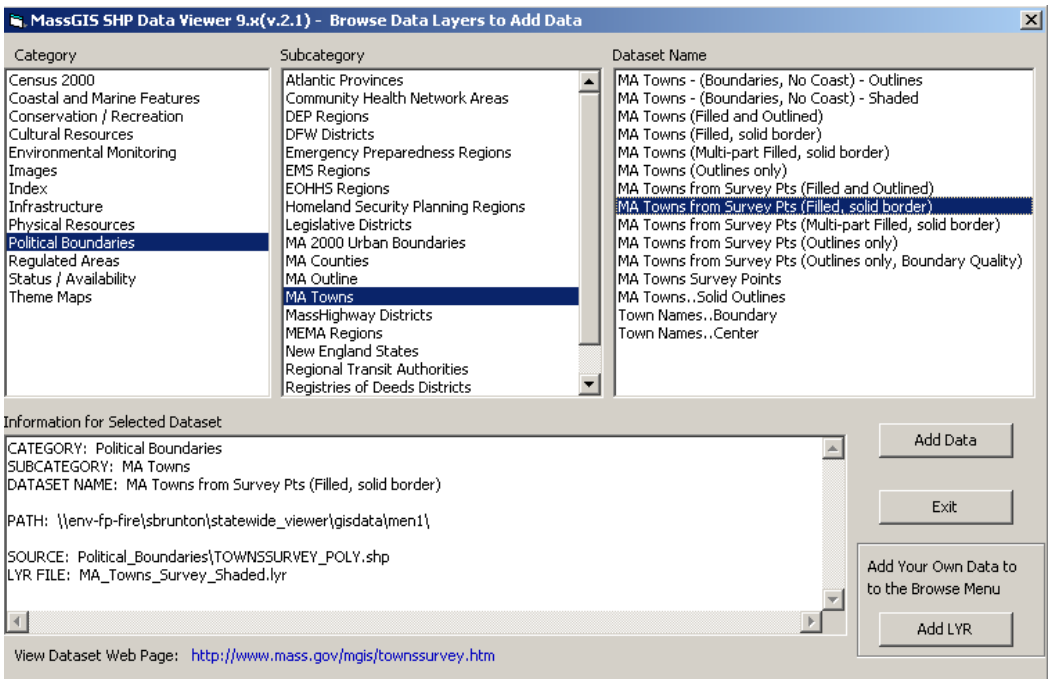
A button

MassGIS has designed a menu system which allows locating data based on categories and subcategories.



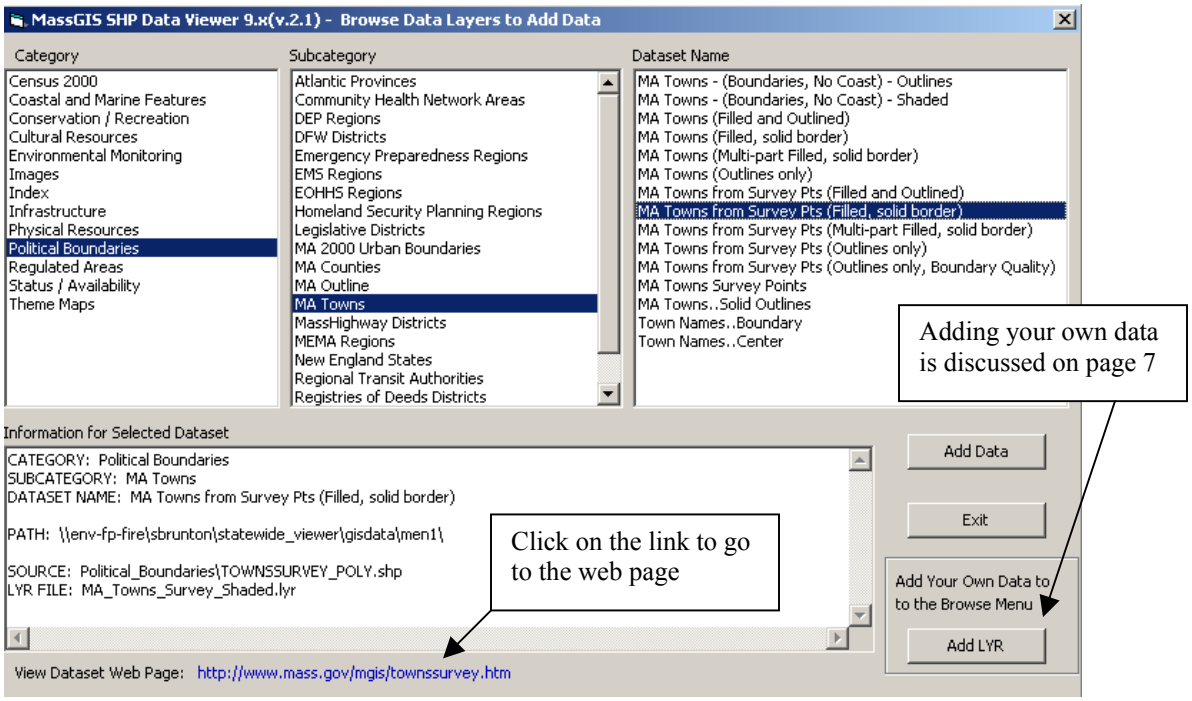
To load a data layer click through the A button menu, follow the Category -> Subcategory -> Dataset Name windows. Once you choose a layer from the last menu item (Dataset Name), the text box titled "Information for Selected Dataset" will be populated with details about the selected Dataset, including the menu choices to the dataset, the path to the shapefile and the name of the lyr file the DataViewer uses for that datalayer selection.

You can load the dataset by either double clicking on the layer under Dataset Name or by selecting the layer and clicking the 'Add Data' button.



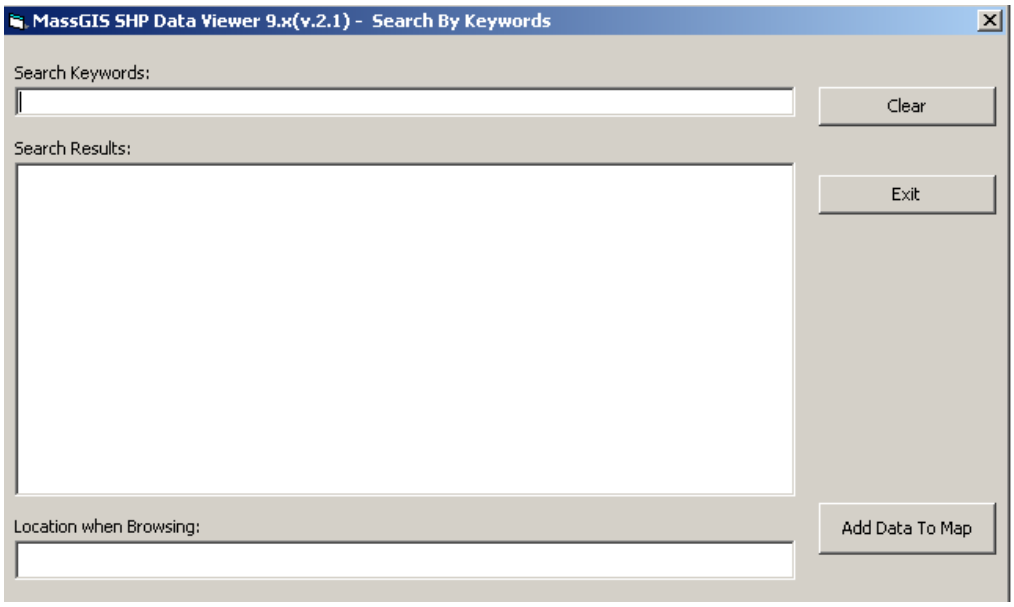
** **NOTE**: When you add data layers they will be turned off (unchecked) when they first load.

You can also view the associated web page on the MassGIS web site describing the dataset, if you have an Internet connection, by clicking on the link at the bottom of the page.

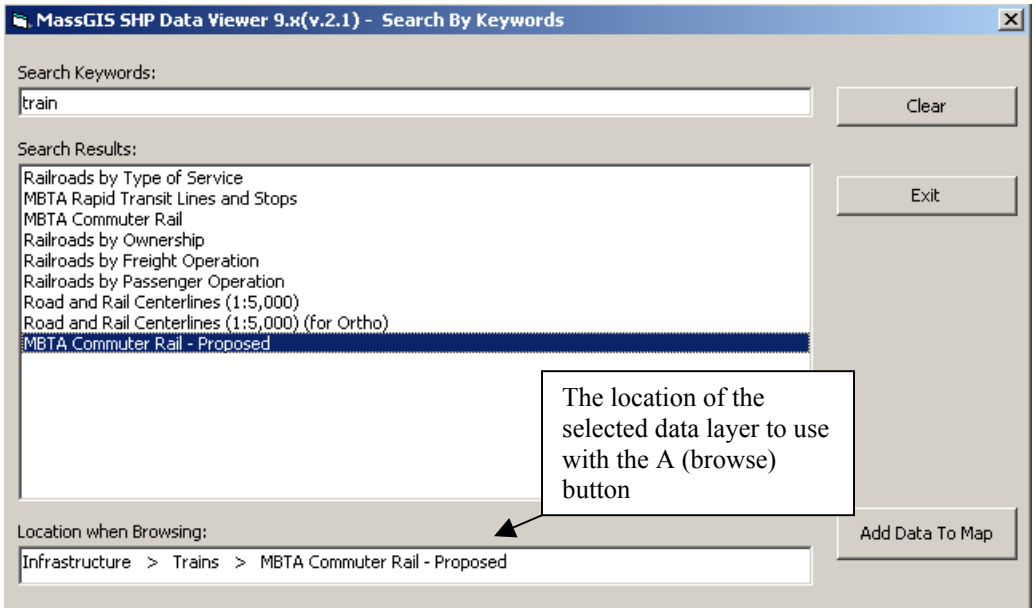


Search button

Under the search tab you can search through the data to find all data layers that match certain keywords. In the Search Keywords field as you type, any layer that has matching keywords will appear in the Search Results list.



An example of searching for all data layers associated with trains.



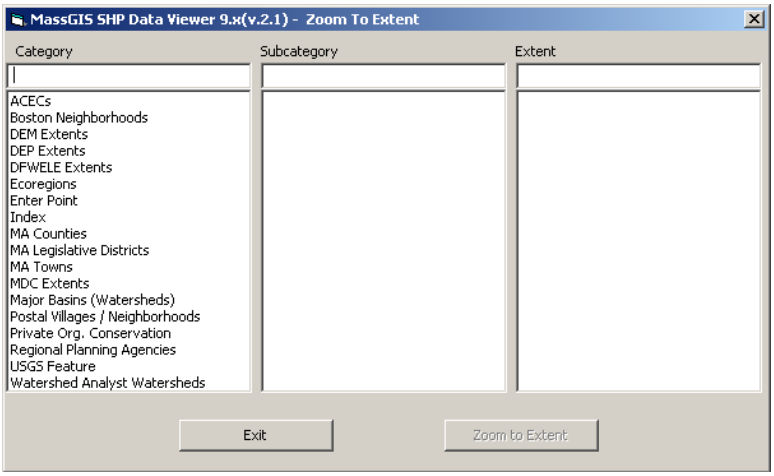
Select a data layer you want to add in the search results list and click the 'Add Data to Map' button to view the data layer in ArcMap.

When a layer is selected in the Search Results, the 'Location when Browsing' box will display where that data layer can be found in the Categories; this will help you avoid having to search for that data again.

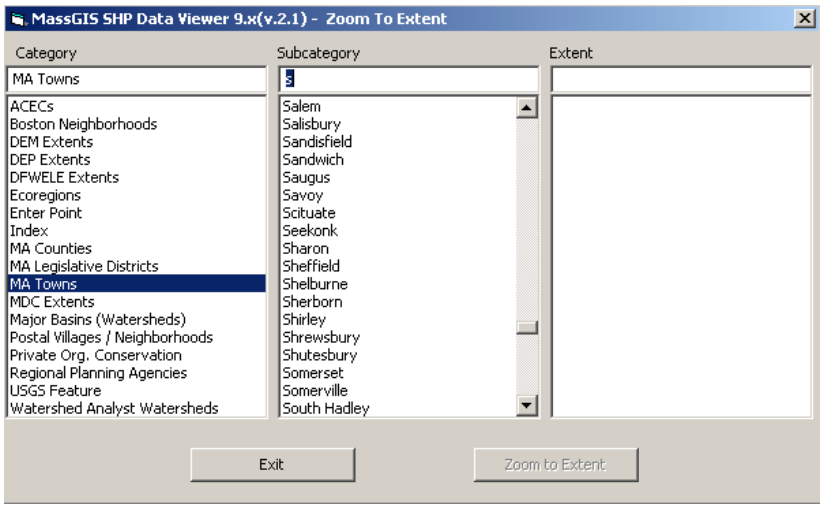
Z button

The Z button has three menu selections, just like the menu for the A button.

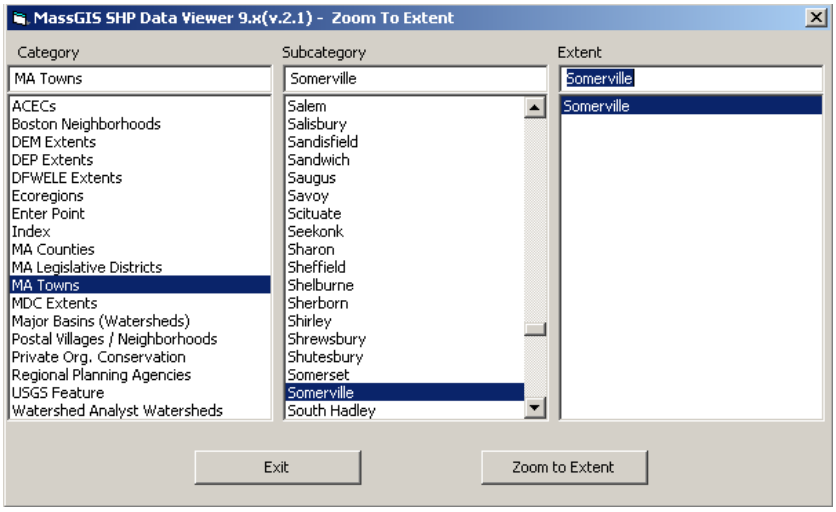
Category -> Subcategory -> Extent



At the top of each list you can use the type ahead field instead of scrolling through the data. The example below displays all the matching MA Town values that begin with 'S'



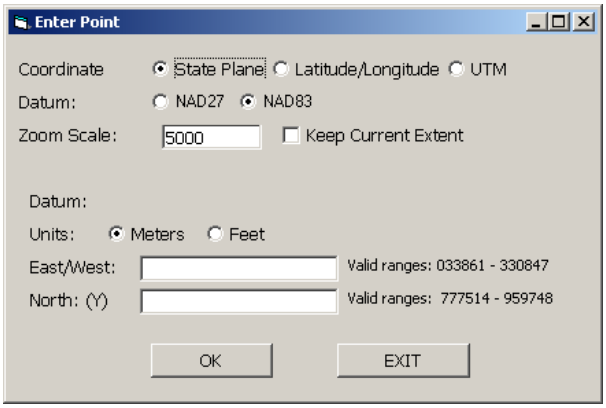
The Zoom to Extent button is disabled until you make a selection in the third (Extent) box.



After you select the extent, you can zoom into the area by either double-clicking an extent or by selecting an extent and clicking the 'Zoom to Extent' button.

ENTER POINT:

In the Zoom menu, one Category option is 'Enter Point'. By selecting this option, a new screen will appear:



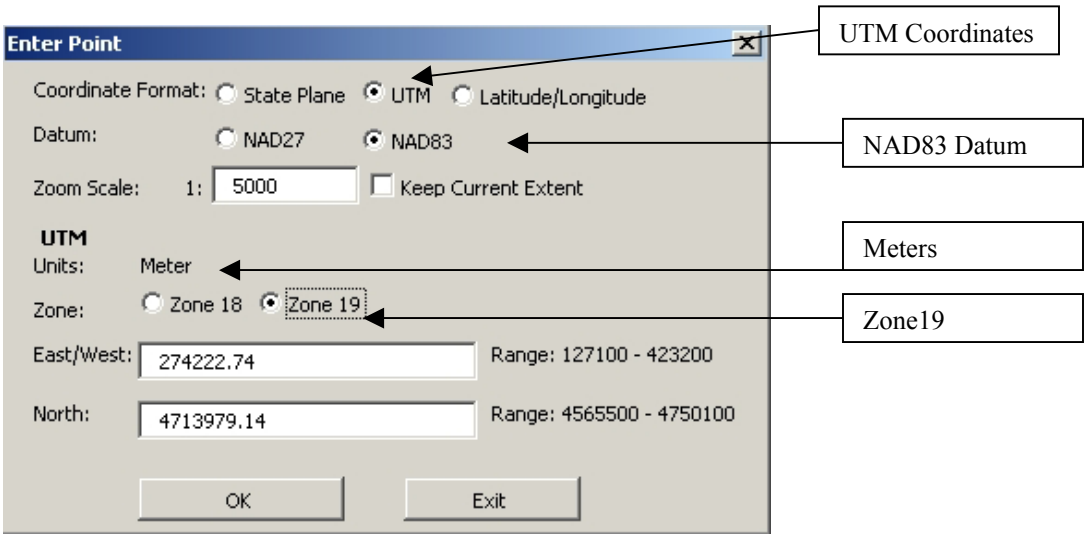
The Enter Point screen will allow you to enter coordinates in order to zoom to a point on the map. MassGIS data is projected as NAD83 Stateplane meters. Since your coordinates may come from different coordinate systems, datums, zones and units, they will be converted to NAD83 Stateplane meters in order to zoom to the point on the map.

Enter Point accepted coordinates are:

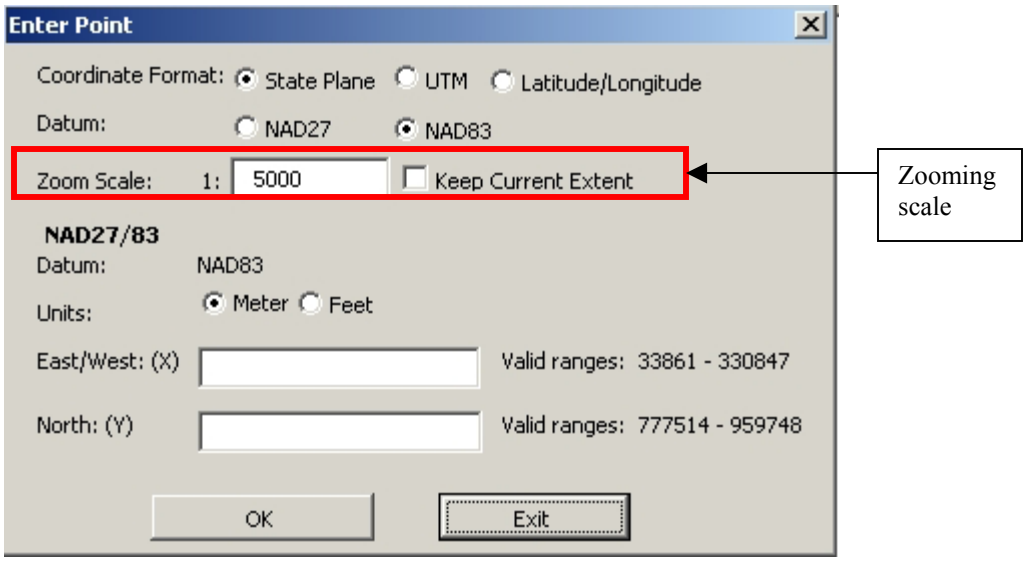
NAD83 State Plane meters
NAD83 State Plane feet
NAD27 State Plane feet
UTM NAD83 State Plane meters, Zone 18
UTM NAD83 State Plane meters, Zone 19
Latitude/Longitude in Degrees Minutes, Seconds
Latitude/Longitude in Decimal Degrees

Select the appropriate options for your coordinate system.

Example: Entering a Coordinate in UTM, NAD83, meters, Zone19

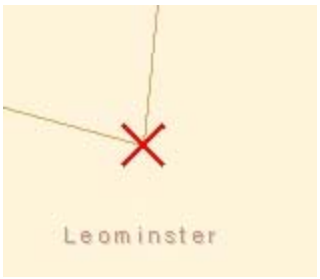


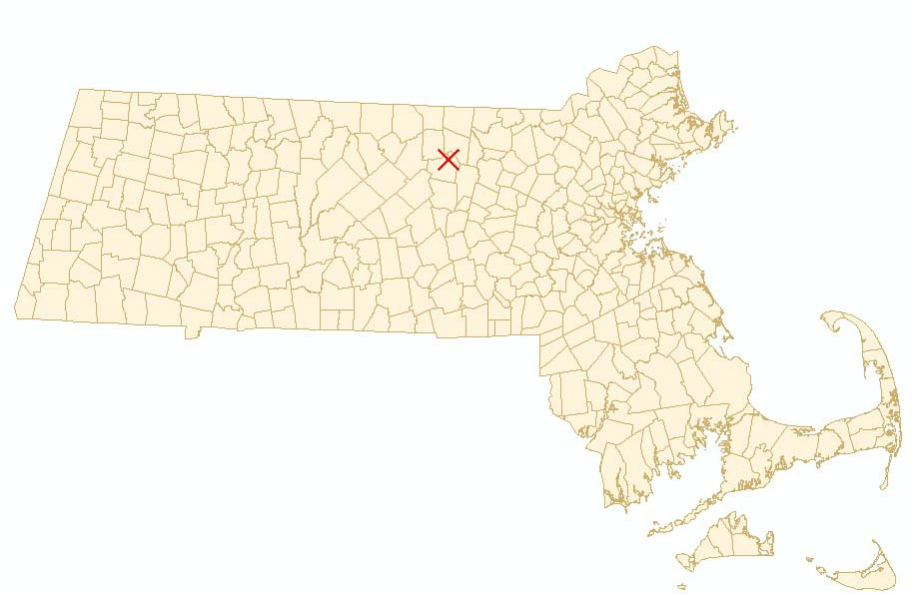
When you enter the Coordinates to zoom to, you can control the scale to which you zoom in.



The default zoom scale is 1: 5000. You can change the zoom scale or click the checkbox next to Keep Current Extent avoid zooming to the point.

When you click OK, a red X will appear at your coordinates, either zoomed in based on the scale or drawn at the current extent.

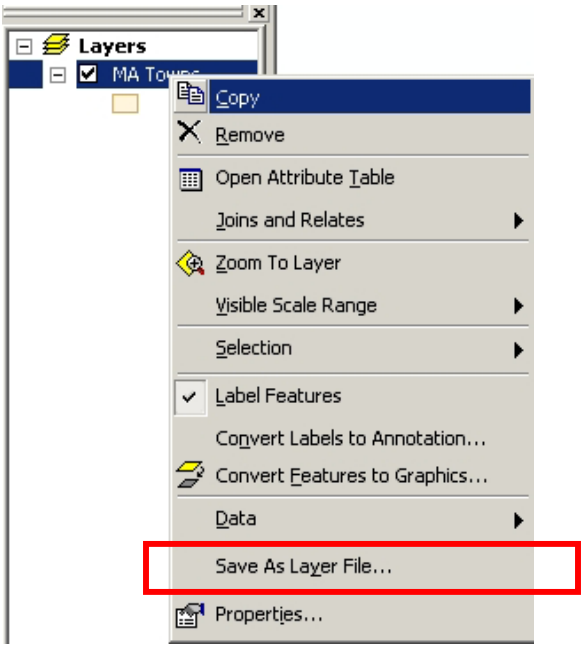




ADDING YOUR OWN DATA

In addition to being able to browse through different categories of MassGIS data using the A button, you can now add your own spatial data to the Data Viewer. This allows easy access to and consistent symbolization of your data. Your spatial data can be in a variety of formats, including Shapefiles, SDE layers and Personal Geodatabase feature classes. If you can create a .lyr file from your data, you can add it to the DataViewer.

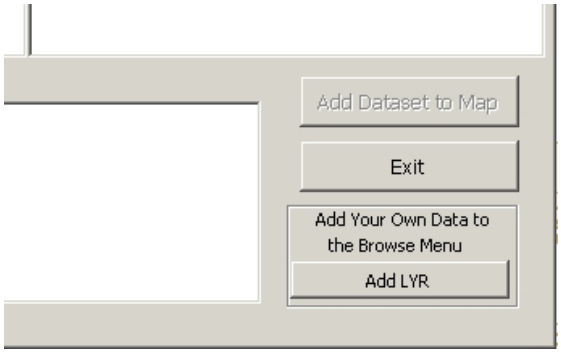
Before you add your data to the Data Viewer, you need to figure out how you want to display it. Load your original data into ArcMap and set the properties, such as symbolization, labeling, and any joins/relates. When you are happy with the results, right click on the data layer in the Layers list and select 'Save as Layer File'.



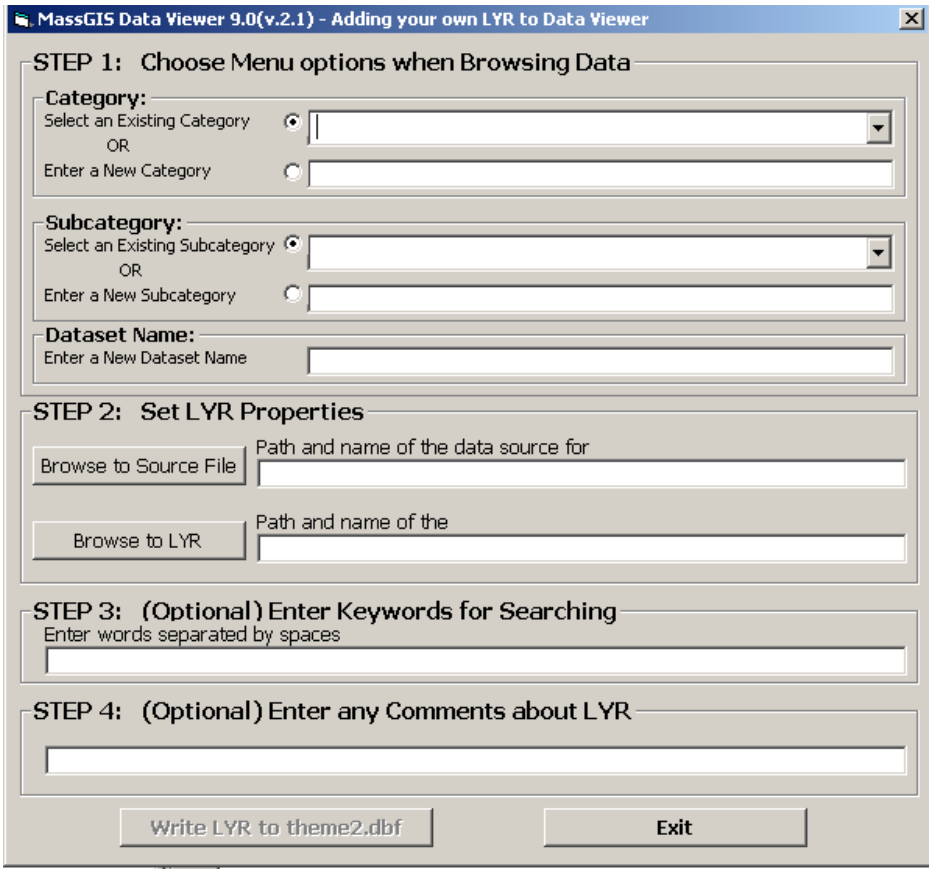
Save the lyr file in an area accessible to the Data Viewer, giving it a name that you understand.

NOTE: You will need to remember the locations and names of the original data and the .lyr file.

In the add data (A button) menu, on the bottom right is the option to 'Add LYR'.



By clicking the button, you will bring up a window where you will need to input information about the data you want to add to the Data Viewer.

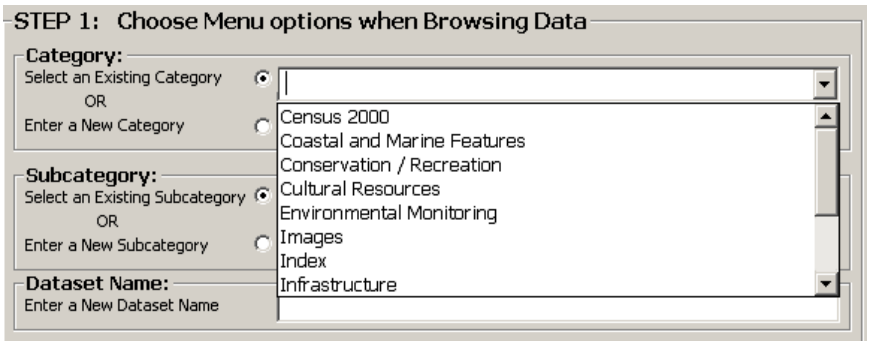


STEP 1: Choose Menu options when Browsing Data

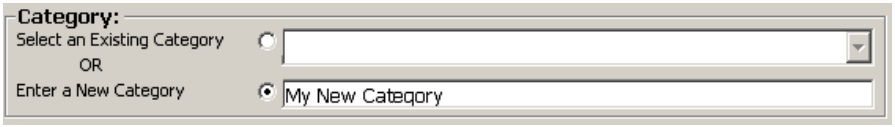
When you use the "A" button of the Data Viewer, you are selecting the Category, Subcategory and Dataset. In order to add your own data, you will have to choose the location of your datasets within that structure in order to be able to navigate to your data using the A button of the DataViewer.

Category

Start by specifying the Category, which is the first option that appears under the Adding your own data to Data Viewer window. You may select one of the existing categories in the pull down list. This list includes all Categories from the MassGIS Data Viewer A button and any Categories you may have already added.

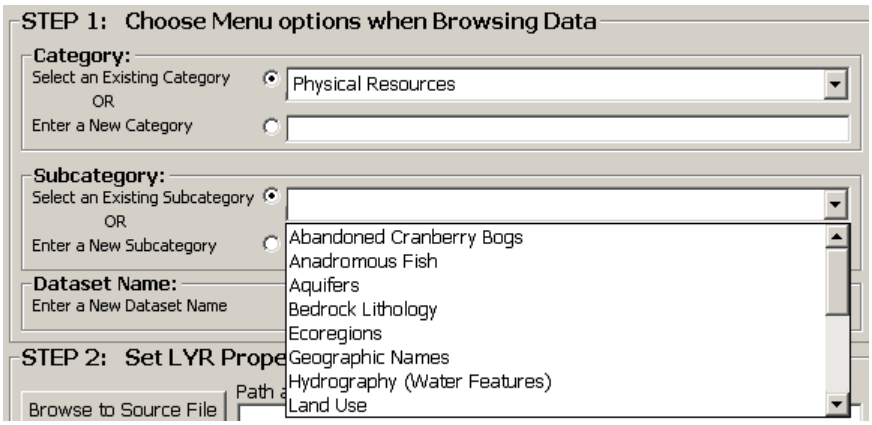


If you would rather start a new main category, then click the circle next to 'Enter a New Category'. This will activate the text box allowing you to enter a new category name.



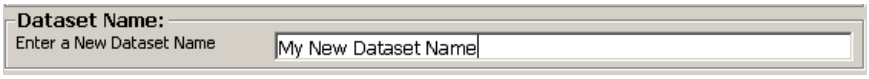
Subcategory

If you select an existing Category, the pull down list of all of associated Subcategories for that Category is populated. Again, you can choose an existing option, or enter a new Subcategory.



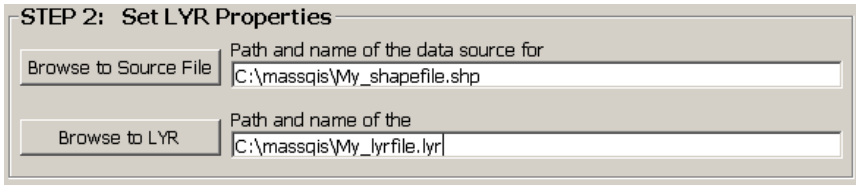
Dataset

Since the Dataset Name describes the layer, each name must be unique.

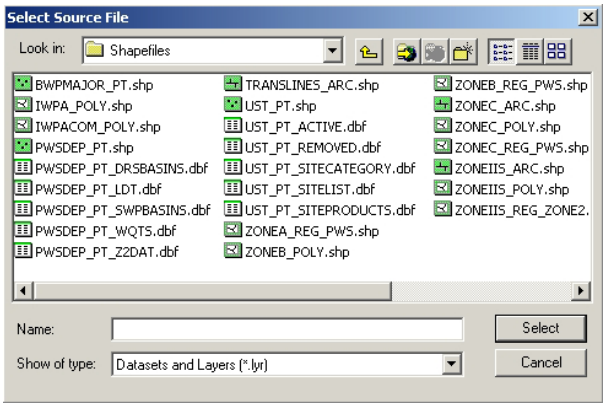


STEP 2: Set LYR Properties

This is where you will add the location information for your data so the Data Viewer can find the data source and the lyr file.

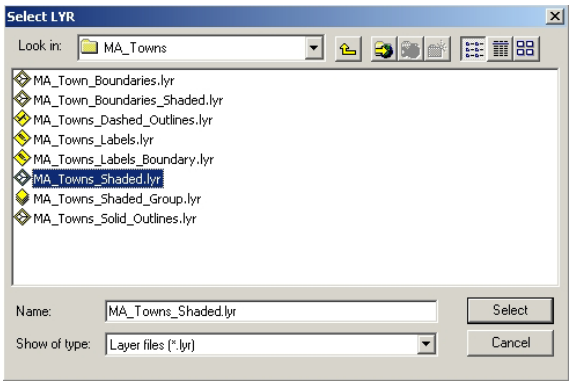


First, either type in the path to the data source, or browse to it with the 'Browse to Source File' button.



The path and the name of the data source must be included.

Then do the same thing again for the .lyr file, either typing in the path to the .lyr file or browsing to it with the 'Browse to LYR' button.

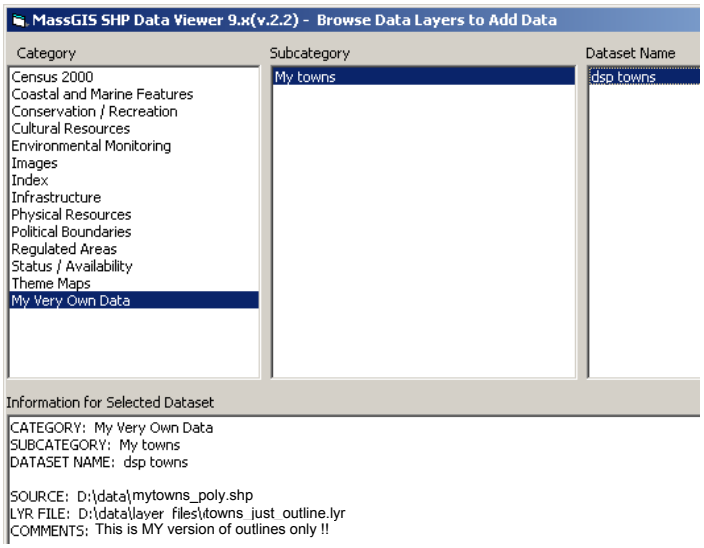


STEP 3: Keywords

This is an optional step: you can enter words to be used in the Search feature. These words should be related to the data layer, to make it easier to locate the data. This feature can be helpful when sharing the data with others or when adding many datasets.

STEP 4: Comments

This is another optional step: you can enter comments or a description about the dataset you are adding to the Data Viewer, such as the date of the data, who collected the data, general description, etc. The comments will appear in the information box of the "A" button screen:



When you have finished filling in the appropriate fields, you can then write this information to the database. Clicking the 'Write to Theme2.dbf' button will fill the values into the database, and alert you to any missing information that is required. When the data is successfully written to the database, a message box will appear confirming the completion.

The theme2.dbf table is supplied with the viewer. Initially it is an empty database, only containing the required fields. You can populate this table through the Data Viewer, with the method above.

After you click OK, you can either enter another lyr file to the database or click the 'Exit' button to leave the 'Adding your own LYR to Data Viewer' screen. When you exit, the program will refresh the Data Viewer to incorporate the new data that you added.

PROBLEMS DISPLAYING LAYERS

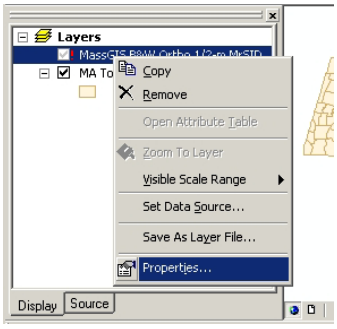
****When you initially load data through the Data Viewer, there may be a red exclamation mark next to the layer, and the data will not draw.**

Occasionally, the original hard coded path is saved with a layer file, which will result in ArcMap not knowing where the data is saved on your computer.

To get around this you will have to resave the lyr file after resetting the data source.

1. Load the layer with the A button of the Data Viewer, which will display the red exclamation mark. *NOTE: pay attention to the PATH, SOURCE and LYR FILE listed in the Information for Selected Dataset. These are the files you will need to browse to, in order to reset the data source.

2. Right click on the layer in the table of contents and select 'Properties'.



This brings up the Layer properties window.

Under the Source tab Click the 'Set Data Source' button.

This will bring up the browse window.

For vector data you will need to browse to where the data is stored, based on the PATH and SOURCE listed in the Information for Selected Dataset of the Data Viewer.

For Images:
You will need to browse to the associated image catalog from here. Make sure you select the image catalog that ends with "_NOENV.dbf".

2005 Color Orthos (MrSID) \gisdata\images\coq2005hsid\COQ2005HSID_NOENV.dbf
2005 Color Orthos (JP2 Lossy) \gisdata\images\coq2005_jp2_lossy\COQ2005_JP2_NOENV.dbf
2001 Color Orthos (MrSID) \gisdata\images\coqhsid\COQHSID_NOENV.dbf
BW Orthos (Half-meter SIDs): \gisdata\images\halfmsid\ HALFMSID_NOENV.dbf
USGS Topo Maps (Multiple MrSIDs): \gisdata\images\quadsid\QUADSID_NOENV.dbf

3. Once the data source is set, your data layer should draw (you may have to refresh the screen first).

4. To preserve the change to the data layer for future use, you will have to save a new lyr file for the dataset(s).

   Right click on the corrected layer and select 'Save as Layer File'.

Save the LYR in \ArcGIS\Lyr_files folder with the proper name from the LYR FILE listed in the Information for Selected Dataset, overwriting the existing lyr file.

Names of the imagery LYR files:

2005 Color Orthos (MrSID) 2005_Color_Orthos_MrSID_indiv.lyr
2005 Color Orthos (JP2 Lossy) 2005_Color_Orthos_JP2_Lossy.lyr
2001 Color Orthos (MrSID) 2001_Color_Orthos_MrSID_indiv.lyr

BW Orthos (Half-meter SIDs): BW_Ortho_Halfm_Indiv_MrSID.lyr
USGS Topo Maps (Multiple MrSIDs): USGS_Topgraphic_Map_(Indiv_MrSID).lyr

NOTE: The new lyr file may not over-write the existing one if the .lyr files have only Read-Only permission. This often happens when files are copied onto a hard drive from a DVD/CD. To check for this, use Windows Explorer to navigate to the \ArcGIS\Lyr_files folder and refresh the screen; check the Modified date of the lyr file you just tried to replace, to make sure it was in fact overwritten. If it was not, you can change the permission on the layer file(s) you want to over-write, then **delete** the existing LYR file(s) associated with the image type(s) and save a new layer file(s) again.

For questions about installation and use of the MassGIS ArcGIS 9.x Data Viewer, use this form to request help:
http://www.mass.gov/mgis/vwr_arcgis_help.htm